REMARKS

Claims 22-40 and 42-54 are pending in the present application. In the Office Action mailed July 24, 2007, the Examiner provisionally rejected claims 22-40 and 42-54 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-17, 23, and 24 of copending Application No. 10/605,546 in view of McCormick (USP 6,026,682). The Examiner next rejected claims 22-39, 43, 47, and 51-54 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 51-53 are rejected under 35 U.S.C. §102(b) as being anticipated by McCormick. Claims 22-40 and 42-54 are rejected under 35 U.S.C. §103(a) as being unpatentable over Prunier (FR 2 536 320) in view of McCormick. Claims 22-40 and 42-54 were rejected under 35 U.S.C. §103(a) as being unpatentable over Behnke et al. (USP 2,510,207) in view of McCormick.

Claim 47 was objected to by the Examiner. Applicant has amended claim 47 to correct the typographical error identified by the Examiner.

Provisional Double Patenting Rejection

With respect to the provisional rejection of claims 22-40 and 42-54 under the doctrine of obviousness-type double patenting as being unpatentable over claims 1-17, 23, and 24 of co-pending Application No. 10/605,546 in view of McCormick, Applicant notes that the provisional obviousness-type double patenting rejection is not the only remaining rejection in either the present application or Application No. 10/605,546. The Examiner has applied rejections under §103(a) for the present application in the current Office Action, and for Application No. 10/605,546 in the Office Action of July 24, 2007. Pursuant to MPEP §§ 1490(V)(D) and 804(I)(B)(1), Applicant therefore takes no present action with respect to this provisional rejection.

Rejection under 35 U.S.C. §112, Second Paragraph

The Examiner rejected claims 22-39, 43, 47, and 51-54 under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In making the rejection, the Examiner cited MPEP §2173.05(d), and stated that "the phrase 'or the like' (in this instance, the term 'type') renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed..., thereby rendering the scope of the claim(s) unascertainable." *Office Action*, July 24, 2007, p. 5

(emphasis in original). The Examiner further cited to MPEP 2173.05(b), which states that "[t]he addition of the word 'type' to an otherwise definite expression… extends the scope of the expression so as to render it indefinite." *Id.* Appellant respectfully disagrees with the Examiner's conclusion that the aforementioned claims are indefinite because of the inclusion of the term "welding-type."

Firstly, it is noted that welding-type is not the same as "or the like", as asserted by the Examiner, in that welding-type does not present an alternative as in using the word "or."

Secondly, while MPEP 2173.05(b) may state that the addition of "type" to an otherwise definite expression may render it indefinite, MPEP 2173.05(b) also states that "[t]he fact that claim language, including terms of degree, may not be precise, does not automatically render the claim indefinite under 35 U.S.C. 112, second paragraph" (citing *Seattle Box Co., v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 221 USPQ 568 (Fed. Cir. 1984)). Furthermore, MPEP 2173.02 states that "[o]ffice policy is not to employ *per se* rules to make technical rejections" and that "[t]he test for definiteness under 35 U.S.C. 112, second paragraph, is whether 'those skilled in the art would understand what is claimed when the claim is read in light of the specification.'" *See also Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576, 1 USPQ2d 1081, 1088 (Fed. Cir. 1986). Applying this test to the current claims, it is clear that the term "welding-type" is in fact definite. That is, one skilled in the art would understand what is called for in claims 22-39, 43, 47, and 51-54 when the claims are read in light of the specification. The Application sets forth that a "welding-type" system, power, or enclosure encompasses welding, cutting, and heating systems/components, and that the term "welding-type" is equivalently applicable with many high power systems/components, such as cutting and induction heating systems/components. *Application*, ¶36. As such, one skilled in the art would understand what is claimed when the claim is read in light of the specification. In light of the foregoing, Applicant respectfully believes that claims 22-39, 43, 47, and 51-54 are definite, and as such, are in condition for allowance.

Rejection under 35 U.S.C. §102(b)

The Examiner rejected claim 51 under 102(b) as being anticipated by McCormick, stating that "McCormick discloses a coolant safety system for an automated welding apparatus, in which the safety system 10 includes a controller (microprocessor 104 and microprocessor module 157)

that is configured to detect connection of a welding component (automated welding gun) to a coolant source [ ] via flow rate sensing and control… and shutting down the flow of liquid coolant via monitoring of the supply and return line sensors." *Office Action*, supra at 6. Applicant respectfully disagrees that McCormick anticipates claim 51. Specifically, Applicant believes that the cited references fails to teach all the elements set forth in claim 51.

Claim 51 calls for a controller configured to detect connection of a welding-type component to a coolant source and, upon connection, permit circulation of coolant through the welding-type component only upon activation of the welding-type component. Conversely, McCormick discloses a coolant system safety device 10 for an automated welding machine that includes a microprocessor 104 configured to monitor pressure flow sensors 100, 102 that measure coolant flow rate to and from a welding component in a coolant supply tube 30 and coolant return tube 36. *McCormick*, Col. 2, ln. 43 to Col. 3, ln. 5. The flow of coolant to the welding component is monitored, and if the flow is outside a set threshold, a solenoid valve 40 is actuated to shut-off flow of the coolant to the welding component. *McCormick*, Col. 3, lns. 5-11. McCormick, however, does not teach that pressure flow sensors 100, 102 act to determine a connection status of the welding component. Rather, the cited reference merely discloses that microprocessor 104 functions to determine a difference in supply and return coolant flow rates via sensors 100, 102 in order to identify leaks in the coolant tubes 30, 36 or a blockage in the welding component. *See McCormick*, Col. 5, lns. 45-57.

Even assuming *arguendo* that sensors 100, 102 function to determine a connection status of the welding component, McCormick still fails to teach or suggest that which is called for in claim 51. That is, the system 10 of McCormick measures a coolant flow in order to determine a connection status. As set forth above, this is <u>not</u> what is called for in claim 51. Claim 51 calls for a controller configured to detect the connection status between the welding-type component and the coolant source <u>before</u> any circulation of coolant through the welding-type component is permitted. As pressure flow sensors 102, 104 must measure a coolant flow rate in order to determine a connection status, it is necessary that coolant flow be commenced before the connection status can be determined. This allowance of coolant flow before determination of a connection status is contradictory to the system of the present invention.

In light of at least the above, claim 51 and its dependent claims are patentably distinct over McCormick.

Rejections under 35 U.S.C. §103(a)

The Examiner rejected claim 22 under §103(a) over Prunier or Behnke et al. in view of McCormick. Claim 22 calls for, in part, a controller adapted to maintain coolant circulation if a temperature of the coolant exceeds a set point temperature. Applicant believes that the combination of Prunier or Behnke et al. and McCormick fails to teach or suggest such a controller.

In setting forth the rejection, the Examiner relied upon McCormick for teaching "one or more temperature and/or pressure sensors in cooperation with a dynamic control means… in order to automatically shut down (deactivate) the flow of coolant in the event of a fault." *Office Action*, supra at 10. As set forth above, McCormick discloses a coolant system safety device 10 for an automated welding machine. Safety system 10 includes a microprocessor 104, 244 configured to monitor pressure flow sensors 100, 102 that measure coolant flow rate to and from a welding component in a coolant supply tube 30 and coolant return tube 36. *McCormick*, Col. 2, ln. 43 to Col. 3, ln. 5. Safety device 10 further includes a temperature sensor IC 334 that measures a temperature of the coolant and is connected to the microprocessor 104, 224 to transfer the temperature data thereto. The microprocessor has trip points programmed therein that, when crossed, stops a welding operation (i.e., deactivates a welding component). *McCormick*, Col. 9, lns. 44-50. That is, when the temperature of the coolant as measured by temperature sensor 334 is too high/low and crosses a preset trip point, a welding operation is terminated and coolant flow shut-off. *Id.*

McCormick, however, does not teach or suggest that which is called for in claim 22, which calls for a controller adapted to maintain coolant circulation if a temperature of the coolant exceeds a set point temperature. Rather, as described above, the system of McCormick merely teaches temperature sensing in order to terminate a welding operation by deactivating the welding component. A review of Col. 9, lns. 38-54 in McCormick reveals that microprocessor 104, 224 is not adapted to maintain coolant circulation if a temperature of the coolant exceeds a set point temperature, but instead, performs the opposite function of terminating a welding operation and ceasing coolant flow upon a sensed temperature falling above/below a trip point. As such, claim

22 and the claims dependent therefrom are patentably distinct over the combination of Prunier or Behnke et al. and McCormick.

The Examiner also rejected claim 30 under §103(a) over Prunier or Behnke et al. in view of McCormick. While Applicant does not necessarily agree with the rejection, Applicant has nonetheless elected to amend claim 30 to further clarify what is being called for therein. As amended, claim 30 calls for, in part, a cooling system including a controller adapted to electronically communicate with the sensing device to receive the component connection status output prior to activation of the welding-type component and to automatically affect circulation of coolant from the coolant source through the coolant supply outlet and the coolant conduit to the welding-type component when the connected welding-type component is activated.

As set forth above with respect to claim 51, assuming *arguendo* that sensors 100, 102 in McCormick function to determine a connection status of the welding component, sensors 100, 102 must measure a coolant flow in order to determine that connection status. This is not what is called for in claim 30, which sets forth that controller determines a detection status prior to activation of the welding-type component, and thus prior to circulation of the coolant. Thus, the controller in claim 30 is configured to detect the connection status between the welding-type component and the coolant source before any circulation of coolant through the welding-type component is permitted. As pressure flow sensors 102, 104 must measure a coolant flow rate in order to determine a connection status, it is necessary that coolant flow be commenced before the connection status can be determined. Therefore, claim 30, and the claims dependent therefrom, are thus patentably distinct over the combination of the cited references.

Claim 40 was also rejected under §103(a) over Prunier or Behnke et al. in view of McCormick. While Applicant respectfully disagrees with the rejection, Applicant has nonetheless elected to amend claim 40 to further clarify what is being called for therein. As amended, claim 40 calls for, in part, welding system including a controller configured to detect a connection status of a welding torch to a cooler prior to circulation of coolant to the welding torch and regulate the cooler such that coolant is prevented from circulating if the welding torch is disconnected from the cooler. That is, coolant is circulated only if a connection between the welding torch and the cooler is detected. As set forth in detail above, McCormick simply does not teach such a configuration, but instead, teaches a system 10 having pressure flow sensors 102,

104 that measure a coolant flow rate in order to (allegedly) determine a connection status. Thus, in system 10 it is necessary that coolant flow be commenced in order that the connection status can be determined. This is not what is called for in claim 40. As such, claim 40 is patentably distinct over the combination of the cited references.

The Examiner rejected claim 44 under §103(a) over Prunier or Behnke et al. in view of McCormick. Applicant has elected to amend claim 44 to incorporate the subject matter of claim 46 and to further clarify what is being called for therein. Claim 46 has been cancelled. As amended, claim 44 calls for a welding system having a cooler connected to a welding torch and designed to circulate coolant to the welding torch, the cooler including a torch connection sensor configured to transmit a torch connection signal to the controller when the welding torch is connected to the cooler, the torch connection signal acquired absent circulation of the coolant. As set forth above, the microprocessor 104 and flow sensors 100, 102 of McCormick do not, and cannot, determine connection status of a welding component absent circulation of a coolant. That is, McCormick teaches a system 10 having pressure flow sensors 102, 104 that, in order in order to determine a welding component connection status as asserted by the Examiner, measure a coolant flow rate. Coolant flow is required before the connection status can be determined. This is not what is called for in claim 44. Therefore claim 44, and the claims dependent therefrom, are patentably distinct over the combination of the cited references.

Similar to claims 30 and 51, claim 54 calls for a welding-type power source including means for automatically circulating coolant through at least the welding-type power means upon activation of the outputting welding-type power means only if the detecting means detects connection of the outputting welding-type power means to the cooling means. That is, coolant is circulated only if a connection between the outputting welding-type power means and the cooling means is detected. As set forth in detail above, McCormick simply does not teach such a configuration, but instead, teaches a system 10 having pressure flow sensors 100, 102 that measure a coolant flow rate in order to determine leaks and/or blockages in coolant tubes 30, 36 or the welding component. Flow sensors 100, 102 require coolant flow in order to acquire data for transfer to microprocessor 104 and for allegedly determining the connection status. This is not what is called for in claim 54. As such, claim 54 is patentably distinct over the combination Prunier or Behnke et al. and McCormick.

Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 22-40, 42-45 and 47- 54.

Applicant appreciates the Examiner's consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,

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General Authorization and Extension of Time

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-2623. Should no proper payment be enclosed herewith, as by credit card authorization being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-2623. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extensions under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 50-2623. Please consider this a general authorization to charge any fee that is due in this case, if not otherwise timely paid, to Deposit Account No. 50-2623.

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